

In the Claims:

Claims 34, 36-44, 46, 47 and 49 are currently under examination. Claims 1-33, 35, 45 and 48 have previously been canceled.

Please amend claims 34 and 36-43 as follows.

Claims 1-33. (Canceled)

Claim 34. (Currently Amended) A ~~disease~~ high frequency, insertional mutagenesis model, wherein the ~~disease~~ model is a transgenic mouse comprising DNAc molecule, wherein said DNAc molecule comprises a promoter P and an L1 cassette sequence comprising a core L1 retrotransposon element flanked by loxP sites, thereby rendering the L1 retrotransposon element useful for transferring of a desired DNA sequence in the mouse, further wherein said DNAc molecule integrates into the genome of said mouse.

Claim 35. (Canceled)

Claim 36. (Currently Amended) The ~~disease~~ model of claim 34, wherein said core L1 retrotransposon element comprises a 5' UTR, ORF1, ORF2 comprising EN and RT domains, a 3' UTR, a poly A signal, and a vector sequence comprising at least one origin of DNA replication and a DNA sequence encoding at least one selectable marker protein.

Claim 37. (Currently Amended) The ~~disease~~ model of claim 34, wherein said promoter P is an RNA pol III promoter or an RNA pol II promoter, said RNA pol II promoter being selected from the group consisting of a constitutive promoter, an inducible promoter, a tissue-specific promoter and a viral promoter.

Claim 38. (Currently Amended) The ~~disease~~ model of claim 36, wherein said origin of DNA replication is a eukaryotic origin of DNA replication.

Claim 39. (Currently Amended) The ~~disease~~ model of claim 38, wherein said isolated DNAc molecule further comprises a prokaryotic origin of DNA replication.

Claim 40. (Currently Amended) The ~~disease~~ model of claim 36, wherein said selectable marker protein is a first marker protein selected from the group consisting of a neomycin resistance protein, green fluorescent protein, β -galactosidase, and a prokaryotic antibiotic resistance protein.

Claim 41. (Currently Amended) The ~~disease~~ model of claim 36, wherein said isolated DNAC molecule further comprises a fragment of non-L1 DNA and a promoter P' for expression of said non-L1 DNA, wherein said non-L1 DNA and promoter P' are positioned within said 3' UTR of between said 3' UTR and said poly A signal.

Claim 42. (Currently Amended) The ~~disease~~ model of claim 41, wherein said non-L1 DNA comprises DNA encoding a second marker protein.

Claim 43. (Currently Amended) The ~~disease~~ model of claim 42, wherein said second marker protein is selected from the group consisting of neomycin resistance protein, green fluorescent protein, β -galactosidase, herpes simplex virus thymidine kinase, and a eukaryotic cell surface protein.

Claim 44. (Previously presented) A sperm cell obtained from a male transgenic mouse, wherein said mouse comprises an isolated DNAC molecule, wherein said DNAC molecule comprises a promoter P and an L1 cassette sequence comprising a core L1 retrotransposon element flanked by loxP sites, thereby rendering the L1 retrotransposon element useful for transferring of a desired DNA sequence in the mouse, further wherein said DNAC molecule integrates into the genome of said mouse.

Claim 45. (Canceled).

Claim 46. (Previously Presented) A transgenic mouse obtained by fertilization of an egg with the sperm of claim 44, wherein said egg is obtained from a female of the same species as said transgenic mouse from which said sperm is obtained.

Claim 47. (Previously Presented) A sperm cell obtained from a male transgenic mouse, wherein said mouse comprises an isolated DNAC molecule, wherein said DNAC molecule comprises a promoter P and an L1 cassette sequence comprising a core L1 retrotransposon element, wherein said core L1 retrotransposon element comprises a 5' UTR, ORF1, ORF2 comprising EN and RT domains, a 3' UTR, a poly A signal, and a vector sequence comprising at least one origin of DNA replication and a DNA sequence encoding at least one selectable marker protein.

Claim 48. (Canceled).

Claim 49. (Previously Presented) A transgenic mouse obtained by fertilization of an egg with the sperm cell of claim 47, wherein said egg is obtained from a female of the same species as said transgenic mouse from which said sperm is obtained.